

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LARRY ORAL AULICK, GEORGE NICHOLAS POWERS
and MARK STEPHEN WEISMAN, JR.

Appeal No. 2002-1838
Application 09/631,765¹

ON BRIEF

Before METZ, GARRIS and MOORE, Administrative Patent Judges.
METZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 17 through 19 and 21 through 37, all the claims remaining in the application.

THE INVENTION

The appealed subject matter is directed to an assembly useful for cleaning toner resin from a printing device. The assembly

¹ Application for patent filed August 3, 2000. According to the official records of the United States Patent and Trademark Office (PTO), this application is a division of application Serial Number 09/058,395, filed on April 9, 1998, and now U.S. Patent Number 6,165,280, issued on December 26, 2000.

comprises a porous member, such as a polyurethane foam, impregnated with a silicone copolymer paste, and a rigid member with a supporting base on which the porous member is mounted, such as cardboard. According to appellants, their assembly is an inexpensive and effective means for removing toner which has leaked in the printing device before it can accumulate in the printing device and result in poor image quality.

Claims 17 through 19 are believed to be adequately representative of the appealed subject matter and are reproduced below for a more facile understanding of the claimed invention:

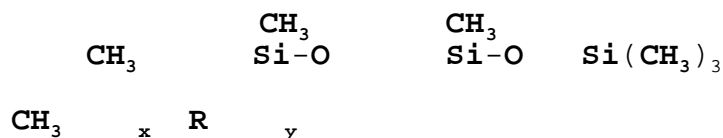
Claim 17. An assembly for cleaning a toner resin from components of a printing device, comprising:

a porous member impregnated with a paste comprising a silicone copolymer, and

a rigid member with a supporting base on which said porous member is mounted.

Claim 18. The assembly as in Claim 17, wherein said silicone copolymer has a polydimethylsiloxane moiety and an alkyl substituted polydimethylsiloxane moiety.

Claim 19. The assembly as in Claim 17, wherein said silicone copolymer has the formula



wherein **x** represents from about 98.8 molar percent to about 99.5 molar percent, **y** represents from about 0.5 molar percent to about 1.2 molar percent and **R** comprises from about 70% by weight to about 100% by weight of a **C₁₅-C₆₀** alkyl group and from about 0% to about 30% by weight of a **C₂-C₁₄** alkyl group.

THE REFERENCES

The references of record which are being relied on by the examiner as evidence of obviousness are:

Latone	3,980,424	September 14, 1976
Peilet	4,184,279	January 22, 1980
Dowlen et al.	5,880,244	March 9, 1999

British Patent Number 1,330,227, General Tire, published September 12, 1973.

THE REJECTIONS

Claims 17 through 19, 21, 25 and 27 through 37 stand rejected as being unpatentable under 35 U.S.C. § 103 from the disclosure of Latone considered with Dowlen et al. Claims 22 through 24 stand rejected as being unpatentable under 35 U.S.C. § 103 from the disclosure of Latone considered with Dowlen et al. in further view of Peilet. Claim 26 stands rejected as being unpatentable under 35 U.S.C. § 103 from the disclosure of Latone considered with Dowlen et al. in further view of General Tire.

OPINION

We begin by observing that each of the examiner's proffered rejections is founded on the combination of Latone considered with Dowlen, either alone or in view of certain other prior art (Peilet

and General Tire). Thus, it is apparent that the stated rejections stand or fall on the propriety of the rejection over Latone considered with Dowlen et al. Accordingly, we shall first consider the examiner's rejection of the claims over the combination of Latone considered with Dowlen et al.

We begin by determining the scope and content of appellants' claims because it is the claims which define the protection for which appellants seek a patent. United Carbon Co. v. Binney & Smith Co., 317 U.S. 228, 232, 55 USPQ 381, 383-384 (1942) (citing General Electric Co. v. Wabash Appliance Corp., 304 U.S. 364, 369, 37 USPQ 466, 468-469 (1938); In re Zletz, 893 F.2d 319, 321, 322, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); SRI Int'l. v. Matsushita Elec. Corp., 775 F.2d 1107, 1121, 227 USPQ 577, 586 (Fed. Cir. 1985) (en banc).

Claim 17, appellants' only independent claim is directed to "an assembly for cleaning a toner apparatus" and the assembly is defined as one "comprising" two elements: a porous member impregnated with a paste comprising a silicone copolymer; and, a rigid member with a supporting base on which said porous member is mounted. According to appellants' specification, the first element, the "porous member", is preferably a low density urethane foam. See page 6, lines 24 through 26 and Figure 2, element **14**. Useful properties for the foam are described at page 7, lines 8 through 11 of the specification. The "paste comprising a silicone copolymer" is described at page 4, line 8 through page 5, line 4 and page 8,

line 3 through page 10, line 9 of the specification. At page 8, lines 6 and 7, appellants disclose that the impregnating compound "has a paste or caulk-like consistency." The terminology "paste" is not otherwise defined in the specification. The second element, the "rigid member with a supporting base", is disclosed as preferably formed of cardboard to which the foam pad is adhesively attached. See page 6, lines 26 through 28 of the specification and Figure 2, element **16**. Cardboard having a thickness of one eighth of an inch (1/8") has been determined to be sufficient to furnish rigidity to and support the porous member. See page 7, lines 12 through 15 of the specification.

Accordingly, claim 17 embraces a porous material, preferably a polyurethane foam, supported by a supporting base, preferably cardboard, and preferably adhesively attached to the base and a rigid member supporting the foam. The porous member is impregnated with a paste which comprises a silicone copolymer but claim 17 does not describe the component comonomers.

We agree with the examiner that Latone discloses an assembly for cleaning toner resins from components of a printing device. The assembly comprises a porous member (see element **103** of the "cleaning roll" depicted in Figure 4) and a rigid member with a supporting base on which said porous member is mounted (see element **101** in Figure 4). Latone also describes the preferred material for the porous member as "urethane foam" (see column 5, lines 3 through

4). Latone discloses that the urethane foam may be impregnated with "silicone oil" to facilitate adhesion of the toner material to the urethane foam sleeve. The examiner recognizes that the silicone oil disclosed by Latone is not described as "a paste comprising a silicone oil."

The examiner relies on the disclosure of Dowlen et al., assigned to Lexmark International, Inc., the assignee of the real party in interest of this application, for the disclosure of the specific, preferred silicone copolymers used by appellants as the "paste comprising a silicone polymer" for impregnating the porous member in claim 17. The examiner reasons that it would have been obvious:

to have provided for a silicone oil copolymer in Latone in order to utilize its heat stability as taught by Dowlen et al., ('424) and to have provided for the copolymer formulated as a paste in order to make it easier to apply as taught by Dowlen et al. ('424).

For reasons which follow, we shall reverse this rejection.

In the first instance, Latone does not provide for impregnating the urethane foam with a "paste comprising a silicone copolymer" but only, generically, provides for a silicone oil as useful. There is neither any other description in Latone of useful "silicone oils" nor any guidance whatsoever provided in Latone for how to select useful "silicone oils" save for their useful property of facilitating adhesion of toner to the roller. Dowlen et al., on the other hand, discloses that silicone oils are "typically used to

prevent toner from adhering to the surface of the fuser roll and thereby degrading image quality and contaminating the fuser surface" (see column 1, line 64 through column 2, line 2, emphasis added).

Thus, Dowlen et al. is describing the function of a release agent, that is, a compound which prevents toner from adhering to a surface rather than a compound for which the toner particles have an affinity and to which they adhere. Further, Dowlen et al. also addresses the problem that conventional silicone oil release agents were known to contaminate the paper passing through the printer and damage the image quality and contaminate other printing machine surfaces. Dowlen et al. resolved both these problems by using as the release agent a random silicone copolymer as defined by the formulae at column 4, lines 8 through 27; column 5, line 8 through column 6, line 18; column 6, line 49 through column 7, line 18.

The copolymers are described in Dowlen et al. as having "a paste or caulk-like consistency" and exhibit the property of being a liquid on the heated fuser roll surface but a solid as they cool on the print surface of the paper (column 4, lines 1 through 5; lines 30 through 39). The copolymers comprise a "silicone oil" and a "silicone wax" portion (column 5, lines 1 through 8). Random silicone copolymers as claimed in appellants' claim 19 are set forth in column 6, line 49 through column 7, line 18 but those copolymers are disclosed as useful sealants for toner cartridges to

prevent toner leakage.

The examiner has simply failed to supply any evidence which establishes that a person of ordinary skill in the art would have been motivated to use the particular silicone copolymers of Dowlen et al., taught as useful release agents or toner cartridge sealants, as the silicone oil for impregnating the urethane foam in Latone. The examiner's reference to the disclosure in Dowlen et al. that the paste or caulk-like silicone copolymers are easy to apply and do not migrate ignores that said disclosure is in the context of using the copolymers as toner cartridge sealants. When used as a toner cartridge sealant, the copolymers are not impregnated on a porous member (see column 7, lines 19 through 31). While Dowlen et al. discloses a pad comprising a felt pad having an effective amount of the release agent thereon for dispensing the release agent on the hot fuser roller, the pad is not disclosed as having a rigid member with a supporting base on which the porous member is mounted as required by claim 17.

Accordingly, we conclude that the examiner has failed to make out a *prima facie* case of obviousness based on the combination of Latone considered with Dowlen et al. Because all the examiner's rejections rely on the combination of Latone with Dowlen et al., we shall reverse all the examiner's rejections.

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SUMMARY

The rejections of the claims under 35 U.S.C. § 103 is **reversed**. The decision of the examiner is **reversed**.

REVERSED

ANDREW H. METZ)	
Administrative Patent Judge)	
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)	
BRADLEY R. GARRIS)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
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)	
JAMES T. MOORE)	
Administrative Patent Judge)	

AHM/gjh

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